

FIG.2

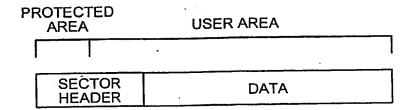
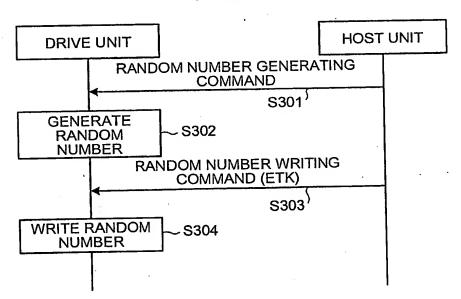
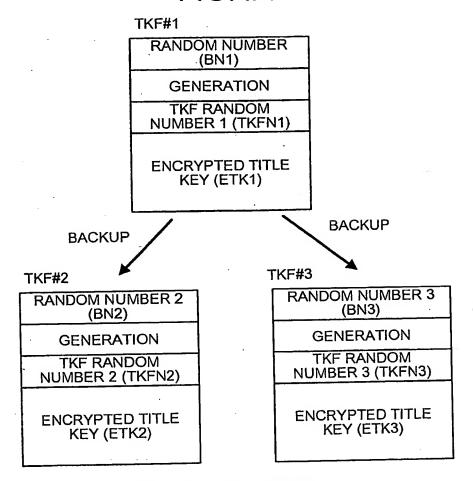


FIG.3



## FIG.4A

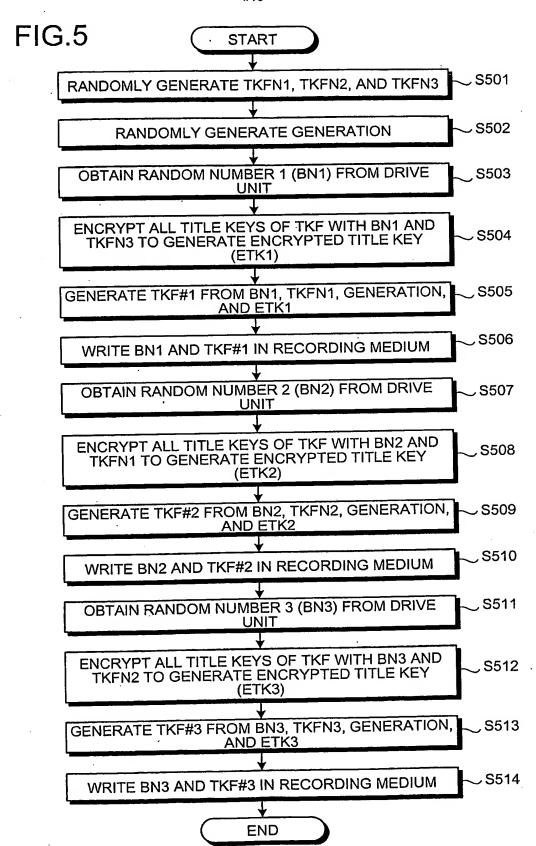


ETK1 = f (TK, BN1, TKFN3) ETK2 = f (TK, BN2, TKFN1) ETK3 = f (TK, BN3, TKFN2)

## FIG.4B

## ETK1 TO ETK3

ENCRYPTED TITLE KEY 1
ENCRYPTED TITLE KEY 2
ENCRYPTED TITLE KEY 3
ENCRYPTED TITLE KEY n



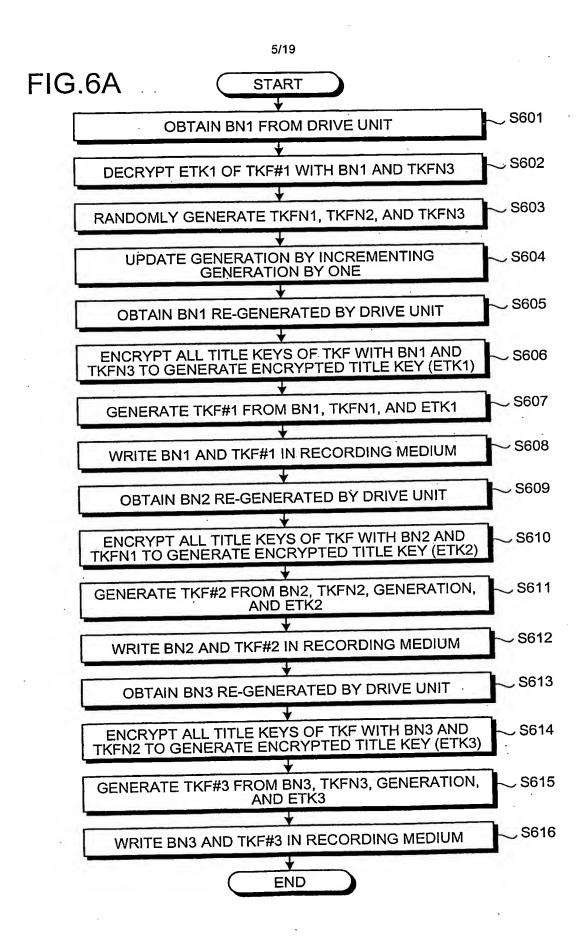


FIG.6B

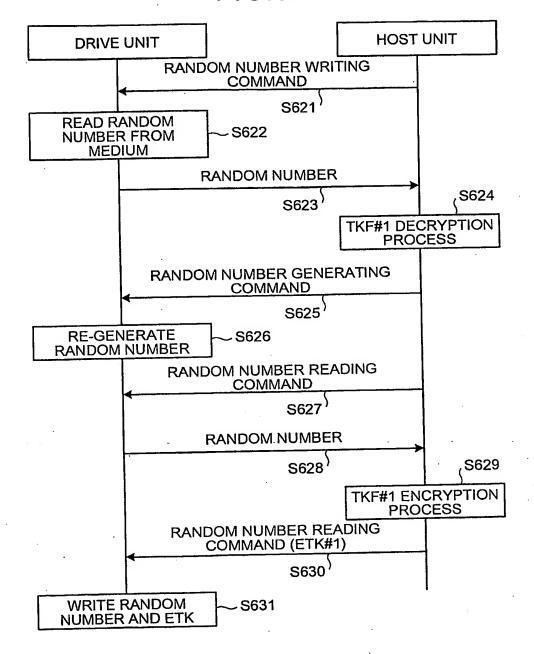
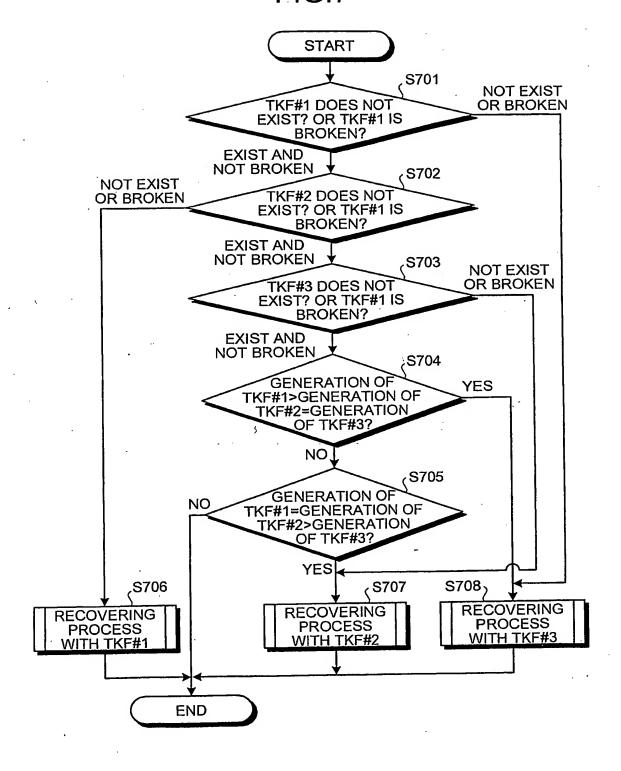
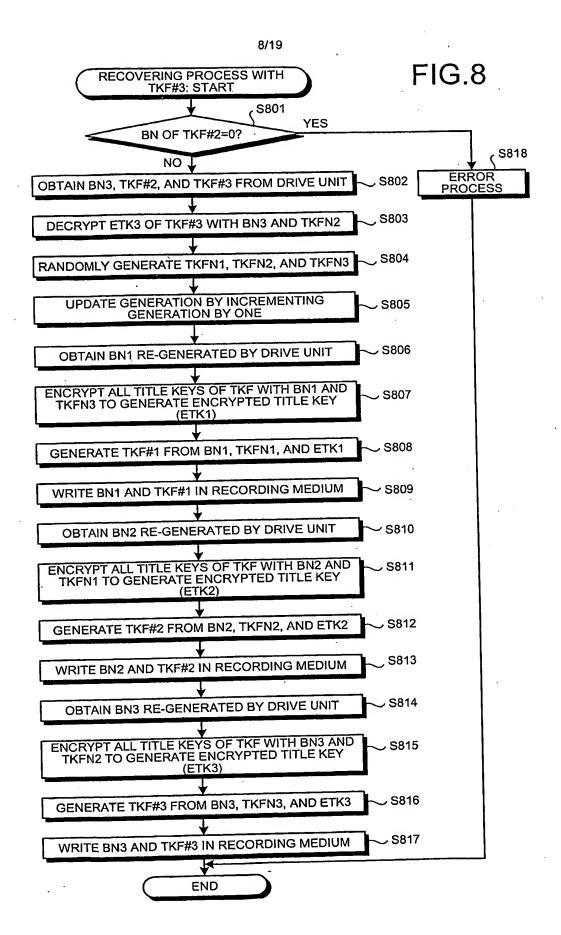


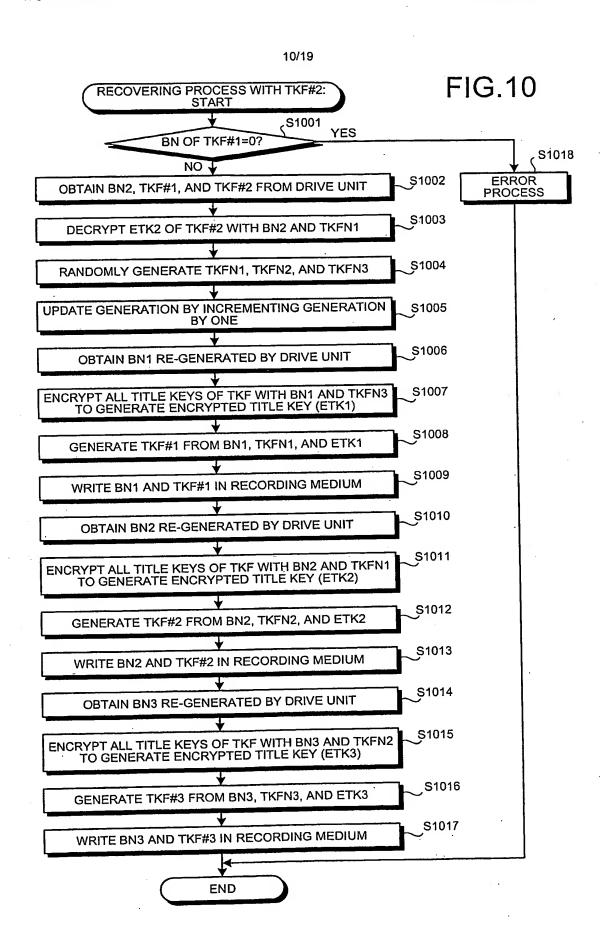
FIG.7



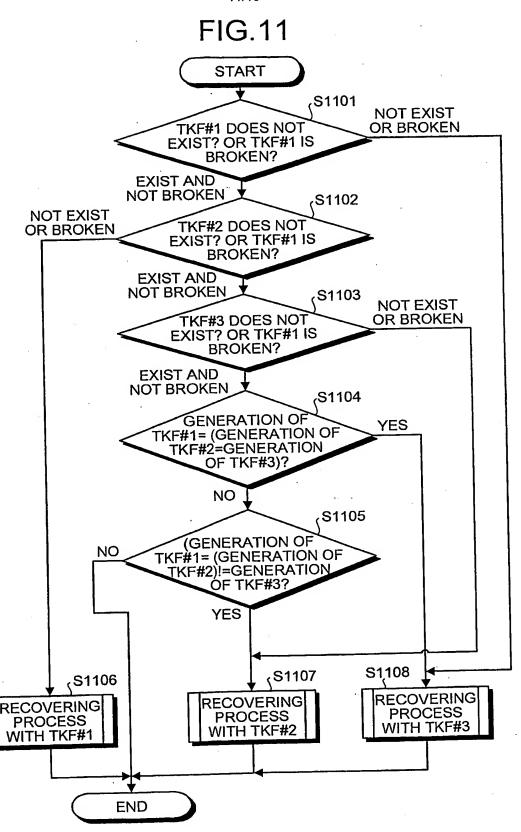


9/19 **RECOVERING PROCESS WITH TKF#1:** FIG.9 **START** (S901 YES BN OF TKF#3=0? S918 NO ▼ ERROR PROCESS S902 OBTAIN BN1, TKF#1, AND TKF#3 FROM DRIVE UNIT DECRYPT ETK1 OF TKF#1 WITH BN1 AND TKFN3 S903 RANDOMLY GENERATE TKFN1, TKFN2, AND TKFN3 S904 UPDATE GENERATION BY INCREMENTING GENERATION S905 BY ONE S906 **OBTAIN BN1 RE-GENERATED BY DRIVE UNIT** ENCRYPT ALL TITLE KEYS OF TKF WITH BN1 AND TKFN3 TO GENERATE ENCRYPTED TITLE KEY (ETK1) S907 S908 GENERATE TKF#1 FROM BN1, TKFN1, AND ETK1 S909 WRITE BN1 AND TKF#1 IN RECORDING MEDIUM S910 **OBTAIN BN2 RE-GENERATED BY DRIVE UNIT** ENCRYPT ALL TITLE KEYS OF TKF WITH BN2 AND TKFN1 TO GENERATE ENCRYPTED TITLE KEY (ETK2) S911 S912 GENERATE TKF#2 FROM BN2, TKFN2, AND ETK2 WRITE BN2 AND TKF#2 IN RECORDING MEDIUM S913 S914 **OBTAIN BN3 RE-GENERATED BY DRIVE UNIT** ENCRYPT ALL TITLE KEYS OF TKF WITH BN3 AND TKFN2 S915 TO GENERATE ENCRYPTED TITLE KEY (ETK3) S916 GENERATE TKF#3 FROM BN3, TKFN3, AND ETK3 WRITE BN3 AND TKF#3 IN RECORDING MEDIUM S917

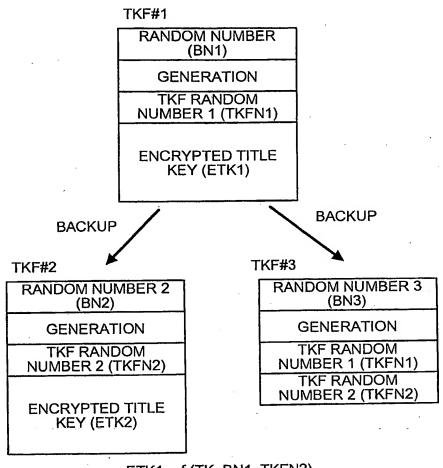
**END** 



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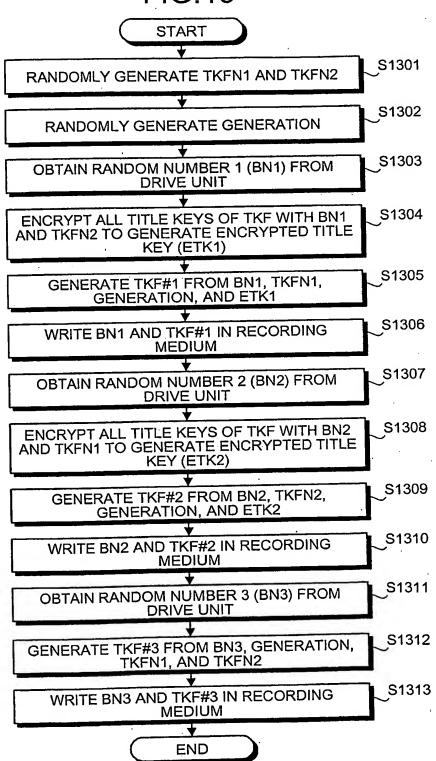


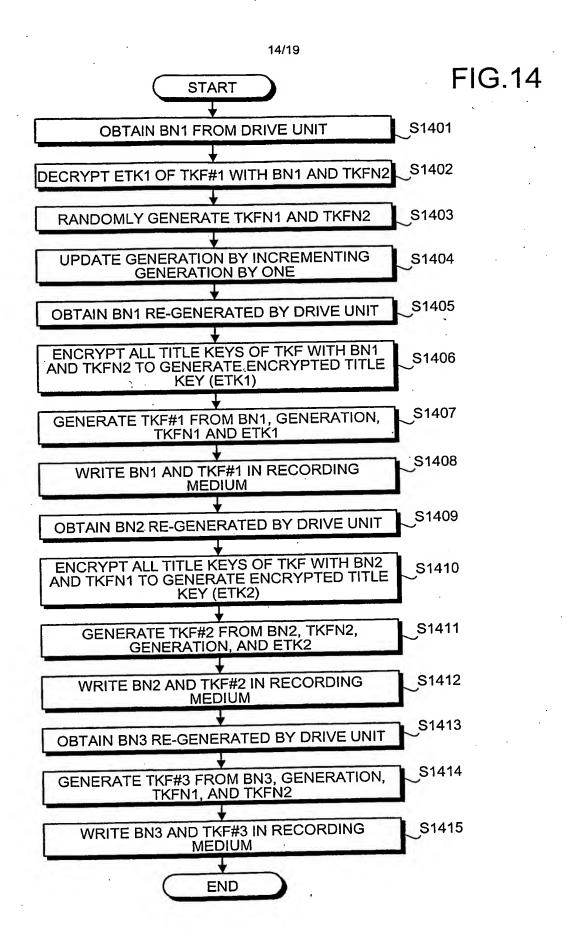
## FIG.12

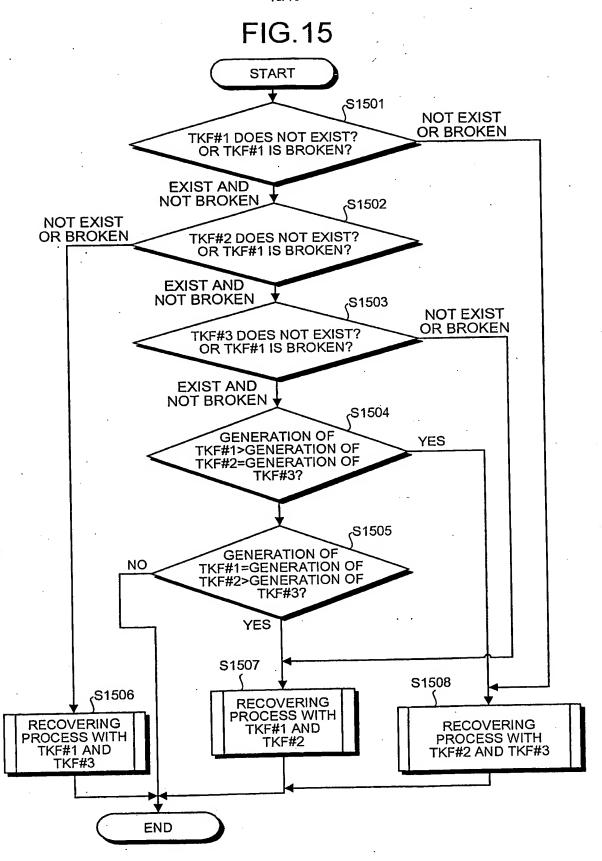


ETK1 = f (TK, BN1, TKFN2) ETK2 = f (TK, BN2, TKFN1)

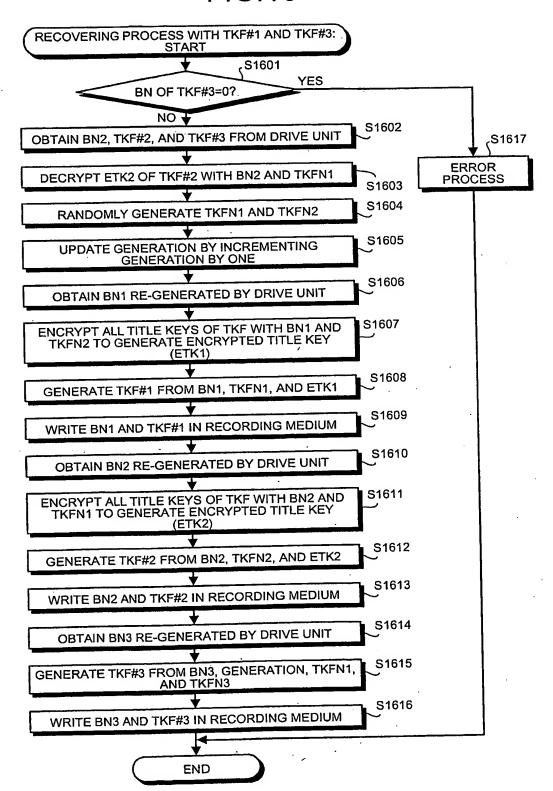
**FIG.13** 



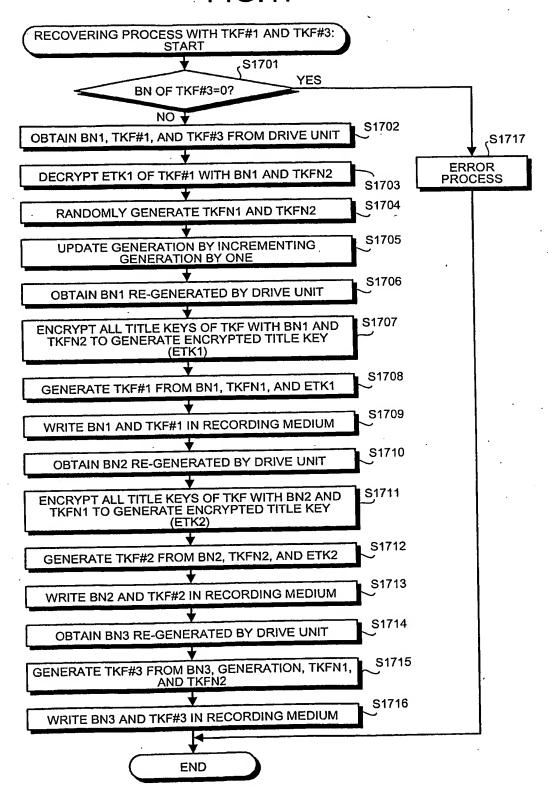




**FIG.16** 



**FIG.17** 



**FIG.18** 

